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EXAMINER	
DANG, HUNG Q	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	**Application No.** 10/679,577	**Applicant(s)** LAZARIDIS ET AL.
	Examiner HUNG Q. DANG	**Art Unit** 2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 August 2010*.
2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 3-11* is/are pending in the application.
  4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1 and 3-11* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  a)☐ All b)☐ Some * c)☐ None of:
    1.☐ Certified copies of the priority documents have been received.
    2.☐ Certified copies of the priority documents have been received in Application No. _____.
    3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
  * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
  Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
  Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This communication is in response to the claims' amendments dated 8/16/2010. The amendment of claim 1; and the cancellation of claim 2 have been entered.

Response to Arguments

2. Applicant's arguments filed on 8/16/2010 have been fully considered but they are not persuasive.

- **Issues raised by the Applicant:**

a) The Applicant's argument on page 5 of the Remarks "*Muurinen does not teach an input mode selector as claimed in amended claim 1. The Examiner stated in the Office Action dated April 16, 2010, that Muurinen teaches "a manual input mode selector" (see Office Action dated April 16, 2010, at pages 6 and 8).*

Furthermore, the Examiner stated that "Muurinen, however, teaches, an input mode selector [...] can be manually selected by the user; instead of (automatic) selection, from one of the at least two applications, a signal indicative of a default active input mode in response to execution of the one of the at least two applications (emphasis in original, see Office Action dated April 16, 2010, at page 11).

Thus, the Examiner agrees that Muurinen does not teach an input mode selector that receives a signal a signal indicative of a default active input mode automatically in response to execution of the one of the at least two applications.

Applicants have taken this opportunity to explicitly state that the input mode selector as claimed in amended claim 1 receives a signal indicative of a default active input mode ***automatically*** *in response to execution of the one of the at least two applications.*

Moreover, Applicants submit that the ***manual input mode selector*** *of Muurinen does not receive a signal indicative of a default active input mode* ***in response to execution of the one of the two at least two applications****.* ***Instead, Muurinen discloses an illuminated pushbutton keyboard in which keys are operable in at least two different modes****. Each key is provided with symbols or areas of color, which denote the different modes. The symbols or areas are selectively illuminated depending upon which mode is selected. The mode of operation is changed with the pushbutton 16 (FCN) (see Muurinen, abstract and column 3, lines 10 to11).*

The manual input mode selector of Muurinen is a simple toggle switch that toggles the selective illumination of symbols independent of execution of an application and is solely based on user intervention to change illumination mode*.*

Thus, Muurinen does not teach an input mode selector as claimed in amended claim 1."

b) The Applicant's argument on page 6-7 of the Remarks "***Applicants submit that Zhao does not teach an input mode selector as claimed in amended claim 1 either****.*

According to the Examiner, Zhao teaches a mobile device having an "input mode selector for (automatic) receiving from one of the at least two applications, a signal indicative of a default active input mode in response to execution of the one of the at least two applications and for determining an active input mode of the keyboard of the mobile device in accordance with the received signal indicative of the default active input mode" (emphasis in original, see Office Action dated April 16, 2010 at page 11).

As previously submitted, analysis of the portions of Zhao upon which the Examiner relies shows that claim elements in question are absent. The Examiner cited paragraphs [0020], [0022], [0029] and [0032] of Zhao as describing an input mode selector. Zhao describes that "the mode of operation (data, telephony or joint) for the multifunctional keyboard 51 is preferably determined by the keyboard mode control software module 54 [...] the keyboard mode control software 54 will preferably automatically set the multifunctional keyboard 51 to a preferred mode", thereby controlling the conversion of the unique input signal from the letter keys of the multifunctional keyboard into character codes or telephony tone signals based on the mode of operation of the device (see paragraph [0029] of Zhao et al).

Thus, the keyboard control software of Zhao assigns functionality to multifunctional keys based on the mode of operation of the device by determining whether to convert the input signal from a key into a character code or into telephony signals based on the mode of operation.

Zhao does not teach or suggest that the keyboard control software, which interprets the functionality of multifunctional keys, can be used for providing a

signal to a backlight controller for controlling at least one light source to selectively illuminate one of the at least two pre- existing indicia on the plurality of keys as claimed in amended claim 1*.*”

c) The Applicant’s arguments on pages 7-8 of the Remarks *“Muurinen and Zhao, either alone or in combination, do not teach an input mode selector as claimed in amended claim 1.*

Muurinen and Zhao, either alone or in combination, do not teach "an input mode selector for receiving, from one of the at least two applications, a signal indicative of a default active input mode automatically in response to execution of the one of the at least two applications"*, as claimed in amended claim 1.*

The Examiner asserts that "it would have been obvious to one of ordinary skill in the art [...] to alternatively provide to the mobile device of Muurinen an (automatic) input mode selector for (automatic) receiving from one of at least two applications, a signal indicative of a default active input mode in response to the execution of the one of the at least two application and for determining an active input mode of the keyboard of the mobile device in accordance with received signal indicative of the default active input mode, as suggested by Zhao et al., so that explicit or manual mode selection of said mobile device can be alternatively substituted by said (automatic) mode selection, as explained above" (emphasis omitted, see Office Action dated April 16, 2010 at page 12).

Applicants respectfully disagree. As stated earlier, Zhao provides a keyboard control software to interpret the functionality of multifunction keys as being a character code or a telephony signal based on the mode of operation for the keyboard.

Substituting the manual input mode selector (FCN Key) of Muurinen with the keyboard control software of Zhao will, at best, result in the interpreting the functionality of keys in Muurinen based on the mode of operation of the device. The keyboard control software will not control the backlight controller to selectively illuminate the keyboard*.*

The combination of Muurinen and Zhao as proposed by the Examiner will not and cannot provide the input mode selector as claimed in amended claim 1 that receives a signal indicative of a default active input mode automatically in response to execution of the one of the at least two applications and provides this signal to a backlight controller for selectively illuminating one of the at least two pre-existing indicia on the keys.

In summary, Muurinen and Zhao do not teach or suggest each and every feature as claimed in amended claim 1. Consequently, Applicants respectfully submit that claim 1 and its dependent claims 3 -11 are not obvious in light of the cited references, either alone or in combination.

Withdrawal of the rejections under 35 USC §103 is respectfully requested.”

- **The Examiner's positions:**

a) The Examiner respectfully disagrees with the Applicant. The Examiner does not entirely agree with the Applicant's statement "*Thus, the Examiner agrees that Muurinen does not teach an input mode selector that receives a signal a signal indicative of a default active input mode automatically in response to execution of the one of the at least two applications".* In the previous Office Action, the Examiner explicitly stated and provided evidence that Muurinen DOES teach a **MANUAL** INPUT MODE SELECTOR (not an **AUTOMATIC** input mode selector, as claimed). Therefore, the Examiner applied the secondary reference (Zhao et al. U.S. Pub. 2002/0054676), which teaches an AUTOMATIC input mode selector, as claimed. The Applicant's argument singly relies on the teaching of Muurinen alone. Therefore, the Applicant's argument is not persuasive.

b) The Examiner respectfully disagrees with the Applicant. Paragraph [0029] of Zhao et al. specifically states "The processor 56 receives keyboard output signals from the multifunctional keyboard 51 and converts these output signals into telephony tone signals, character codes or both. **The mode of operation (data, telephony or joint)** for the multifunctional keyboard 51 is preferably **determined by the keyboard mode control software module 54** based on either the current requirements of the device 50, a selection by the user of the device 50, or possibly based on some other triggering event. **The keyboard mode control software 54 may, for example, set the device 50 to a particular keyboard mode when a software application is executed on the device 50 and possibly when a particular operation is executed by the software**

application. **For instance, if an address book application is executed, the keyboard mode control software 54 will preferably automatically set the multifunctional keyboard 51 to a preferred mode**. **When entering or editing an address book entry, data mode is the preferred mode for editing or entering a name, email address, or street address field, whereas joint mode is the preferred mode for editing or entering a telephone number field**. Conversely, when retrieving an address book entry, data mode is the preferred mode for retrieving a name, email address, or street address, whereas either telephony mode, joint mode or data mode may be the preferred mode for retrieving a telephone number depending upon the purpose for which it is being retrieved. For instance, if a telephone number is retrieved from an address book in order to initiate a voice communication, the number will preferably be retrieved in telephony or joint mode.", which clearly indicates the existence of an **AUTOMATIC** mode selector.

The claimed limitation "***a backlight controller for controlling at least one light source to selectively illuminate one of the at least two pre- existing indicia on the plurality of keys"*** is already met by the teaching of Muurinen.

c) The Examiner respectfully disagrees with the Applicant. In light of the above explanations in parts (b) and (c), the Examiner maintains that Muurinen and Zhao et al., in combination, do teach the input mode selector of claim 1. Since both teachings of Muurinen and Zhao et al. concern an input device having multiple modes. Muurinen teaches a **manual** input mode selector and Zhao teaches an **automatic** input mode selector. Therefore, it would have been obvious to one of ordinary skill in the art to alternatively provide to the mobile device of Muurinen an **automatic** input mode selector for automatic receiving from one of at least two applications, a signal indicative of a default active input mode in response to the execution of the one of the at least two application and for determining an active input mode of the keyboard of the mobile device in accordance with received signal indicative of the default active input mode, as suggested by Zhao et al (see paragraph [0029])., so that manual mode selection of said mobile device can be **alternatively substituted** by said automatic mode selection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 3-7 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muurinen U.S. Patent 5,408,060 in view of Zhao et al. U.S. Pub. 2002/0054676.

Regarding claim 1, Muurinen teaches a mobile device for executing at least two applications (implied, applications involved the use of alphanumeric characters such as text messaging or numeric characters, calculating), having a keyboard (figure 7, unit 14); Said keyboard having a plurality of keys (see figure 7), each of the keys having at least two pre-existing indicia depicted thereon (see figures 1 through 4b); a backlight controller (see figures 8-13 and columns 3-4) responsive to the active input mode provided by an input mode selector (Figure 7, unit 16) for controlling at least one light source to selectively illuminate one of the at least two pre-existing indicia on the plurality of keys, the illuminated indicia defining an active portion of the keyboard of the mobile device (see columns 3-4).

Muurinen, however, teaches an input mode selector (figure 7, unit 16) so that a desired application (applications involved the use of alphanumeric characters such as text messaging or numeric characters, calculating) can be **manually** selected by the user; instead of (**automatic**) selection, **from one of the at least two applications**, a signal indicative of a default active input mode **in response to execution of the one of the at least two applications**.

Zhao et al., in the same field of endeavor, teaches a mobile device for executing at least two applications. Said mobile device has a keyboard having a plurality of keys, each of the plurality of keys having at least two pre-existing indicia (see figures 1-3; characters and numerical symbols). Said mobile device also has an input mode selector for (**automatic**) **receiving from one of the at least two applications**, a signal indicative of a default active input mode **in response to execution of the one of the at least two applications** and **for determining an active input mode of the keyboard** of the mobile device in accordance with the received signal indicative of the default active input mode (see paragraph [0020], [0022], [0029] **and [0032]**).

Since both teachings of Muurinen and Zhao et al. pertain to entry of data in a communication device (phone) which involve entry of numbers and characters on keys; and Muurinen teaches the problem of having two indicia on keys on a phone device and uses the illumination of portions of the keys to solve the problems; Thus, Muurinen teaches/suggests the solution to the same problem found on the keyboard taught by Zhao et al; and Zhao et al. teaches that the mode switching does not have to be manually actuated but **may be done automatically**; Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to alternatively provide to the mobile device of Muurinen an (automatic) input mode selector for (automatic) **receiving from one of the at least two applications**, a signal indicative of a default active input mode **in response to execution of the one of the at least two applications** and **for determining an active input mode of the keyboard** of the mobile device in accordance with the received signal indicative of the default active input mode, as suggested by Zhao et al., so that explicit or manual mode selection of said mobile device can be alternatively substituted by said (automatic) mode selection, as explained above.

Regarding claim 3, the active mode determined by the input mode selector of Muurinen in view of Zhao et al. is also **one of** a **numeric mode, an alphabetic mode** (see figures 1-6), a non-alphabetic mode, a full keyboard mode, a directional mode and a gaming mode.

Regarding claim 4, the active portion of the keyboard of Muurinen in view of Zhao et al. is also selectively illuminated by the at least one light source is a portion of at least one key on the keyboard (see figures 2-4).

Regarding claim 5, the at least one light source of the device of Muurinen in view of Zhao et al. also includes at least one light emitting diode (see column 3, lines 25-27).

Regarding claim 6, Muurinen also teaches the at least one light emitting diode being connected to the keyboard by at least one light pipe (column 6 lines 24-25 and figures 9-10, unit 19).

Regarding claim 7, the active portion disclosed by Muurinen is also illuminated using a different illumination level than a non-active portion of the keyboard (column 3, lines 11-66). Even though, Muurinen does not specifically teach using a different **single color** illumination level for the active portion than a non-active portion of the keyboard, however, one of ordinary skill in the art would recognize that using different illumination levels of a single color or multiple colors would be functionally equivalent for distinguishing the active and non-active portion(s) of the keyboard. Therefore, by choice of design, it would have been obvious to one of ordinary skill in the art to provide different illumination levels of a single color for the active/non-active portion(s) of the keyboard.

Regarding claim 9, the active portion disclosed by Muurinen is also selectively illuminated using a colored light.

Regarding claim 10, Muurinen also teaches selectively illuminating the active portion using a different color than a non-active portion of the keyboard (column 3, lines 11-66).

Regarding claim 11, the one of the at least two applications taught by Muurinen in view of Zhao et al. also includes **one of** a **telephone dialer application**, an email application, a notepad application, and a game application (see figure 7 of Muurinen).

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Muurinen U.S. Patent 5,408,060 in view of Zhao et al. U.S. Pub. 2002/0054676 and in further view of Adachi et al. U.S. Patent 6,693,272.

Regarding claim 8, Muurinen in view of Zhao et al. teaches the mobile device of claim 1, however, Muurinen in view of Zhao et al. does not specifically teach that the active portion is selectively illuminated using optical cancellation.

Adachi et al. teaches a device wherein optical cancellation method is employed for canceling undesired optical signals to achieve optimal illumination. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to provide optical cancellation method to the mobile device disclosed by Muurinen in view of Zhao et al., as evidenced by Adachi et al. so that optimal illumination of the desired keys disclosed by Muurinen in view of Zhao et al. can be achieved.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUNG Q. DANG whose telephone number is (571)272-3069. The examiner can normally be reached on 9:30AM-6PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Zimmerman can be reached on (571) 272-3059. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hung Q Dang/
Examiner, Art Unit 2612
8/30/2010

/Brian A Zimmerman/
Supervisory Patent Examiner, Art Unit 2612